

REMARKS/ARGUMENTS

Reconsideration of this application and entry of the foregoing amendments are respectfully requested.

The claims have been revised to require treatment of microbial cells enzymatically to release the cell contents comprising RNA (step i). With this revision, claim 8 and 9 have been cancelled without prejudice.

Claims 6, 8-11, 13, 24 and 26-29 stand rejected under 35 USC 103 as allegedly being obvious over Halasz et al and Tanekawa et al. Withdrawal of the rejection is submitted to be in order for the reasons that follow.

Claim 6 as now presented requires treating microbial cells enzymatically to release the cell contents comprising RNA (step i), followed by two consecutive separation steps (steps (ii) and (iii)), resulting in separated RNA, which is subsequently converted to 5'-ribonucleotides (step iv). The claimed process provides a simple and effective method of producing compositions containing 5'-ribonucleotides which would not have been suggested by Halasz et al and Tanekawa et al.

Halasz et al relates to the use of yeast components in food production. Halasz et al teaches rupturing yeast cells using a variety of approaches, extracting soluble components (e.g., proteins, nucleic acids, etc.), followed by separation and concentration of proteins and/or other components. (See, for example, Figure 36 of Halasz et al.)

As the Examiner points out, Halasz et al does not teach separating RNA present in the released cell contents from other soluble cell material (comprising peptides and small proteins) smaller than 50 kDa. As the Examiner also appreciates, Halasz et al does not teach converting the separated RNA into 5'-ribonucleotides. Both of these steps are required in Applicants'

process of producing a composition containing 5'-ribonucleotides.

The Examiner relies on Tanekawa et al to cure certain of the failings of Halasz et al. While Tanekawa et al relates to a process of producing a yeast cell extract containing 5'-ribonucleotides, the approach used is significantly different from that claimed.

Tanekawa et al teaches releasing yeast cell contents, separating solid material from the cells from released soluble material (containing extracted RNA) by filtration or centrifugation, and converting separated RNA into 5'-ribonucleotides. Thus, the method of Tanekawa et al, in contrast to Applicants' process, includes a single separation step, that step corresponding to step (ii) of the claimed process. As explained in detail in the February 18, 2010 Amendment, the effect of Applicants' additional separation step is the production of a composition containing substantially higher concentrations of 5'-ribonucleotides.

It is submitted that it is only with hindsight, that one would have combined the teachings of Halasz et al with those of Tanekawa et al because the two are not compatible. In this regard, attention is again directed to Figure 36 of Halasz et al.

Described in Figure 36 is a method of separating yeast RNA from other soluble components, such as protein. In the first step of the method of Halasz et al, the microbial cell contents are released by alkaline treatment. In contrast, in Tanekawa et al, microbial cell contents are released by autolysis at a pH ranging from 6.0 to 6.6 (col. 2,1. 33-35). One skilled focused on devising a simple and effective process for the production of compositions containing 5'-ribonucleotides would have been discouraged, not encouraged, from combining the methods of Tanekawa et al and Halasz et al as the Examiner has done.

The Examiner contends that one skilled in the art would have been motivated to combine Halasz et al with Tanekawa et al because they both teach the desirability of ribonucleotides

extracted from yeast for producing a flavoring composition. While the references may have that in common, no motivation is seen for altering the process taught by either reference to arrive at the claimed process. Furthermore, one skilled in the art could not have anticipated that making such an alteration would have provided the advantages that Applicants have demonstrated to be associated with their approach. Accordingly, reconsideration is requested.

Claims 7 and 25 stand rejected under 35 USC 103 as allegedly being obvious over Halasz et al and Tanekawa et al taken in combination with Potman et al. Claims 12 and 30 stand rejected as obvious over Halasz et al and Tanekawa et al taken in combination with Fernandez et al. Claims 14 and 15 stand rejected as obvious over Halasz et al and Tanekawa et al taken in combination with Tsuda et al. Claims 20 - 22 stand rejected as obvious over Halasz et al and Tanekawa et al taken in combination with Keller et al. Claims 23 stands rejected as obvious over Halasz et al and Tanekawa et al taken in combination with Chae et al. The fundamental failings of the combination of Halasz et al and Tanekawa et al are described in detail above. Nothing in the any of the additionally cited documents would have cured those deficiencies. Accordingly, reconsideration and withdrawal of the rejections are requested.

Submitted herewith is an Applicant Initiated Interview Request Form. The undersigned will telephone the Examiner to schedule a telephonic interview with the Examiner and the Examiner's Supervisor prior to the issuance of any further Action.

This application is submitted to be in condition for allowance and a Notice to that effect is requested.

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Respectfully submitted,

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